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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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27383	7590	11/03/2004	EXAMINER	
CLIFFORD CHANCE US LLP 31 WEST 52ND STREET NEW YORK, NY 10019-6131			BAYARD, DJENANE M	
			ART UNIT	PAPER NUMBER
			2141	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/870,811

Applicant(s)

SMITH ET AL.

Examiner

Djenane M Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) * | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>01/11/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 14-17, 20, 24-26, 28-31, 34-37, 40, 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,513,019 to Lewis in view of U.S. Patent No. 6,480,940 to Aino and further in view of U.S. Patent Application No 2002/0138389 to Martone et al.

1. As per claim 1, Lewis teaches a method for delivering data objects containing data subject to periodic updates to a plurality of clients via a data communication network, the method comprising the steps of: connecting to at least one input data stream, each input data stream carrying a respective type of data objects (See col. 4, lines 55-59); establishing a communication session with at least one client, receiving on a particular input data stream a current state for a specific data object (See col. 8, lines 65-67 and col. 9, lines 1-5).; However, Lewis fails to teach updating an object pool cache to reflect the current state of the specific data object for each respective client subscribed to the particular input data stream and wherein each client having an associated profile

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comprising data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams;

Aino et al teaches a method of controlling cache memory in multiprocessor system and the multiprocessor system based on detection of predetermined software module. Furthermore, Aino teaches updated data is reflected in the cache block and the state of the cache block is changed in accordance with the state transition (See col. 10, lines 10-26).

Martone et al teaches a browser interface and network based financial service system. Furthermore, Martone et al teaches an authentication system that also provides access to a user entitlement level containing a list of objects according to user entitlement. That is to say, different users are accorded different entitlement levels and as such, access to specific objects resident in system 10. Most preferably, a separate user entitlement level associates a user with specific market data. The authentication system also contains a move/add/change (MAC) function that updates the security function with new or changed user information. The MAC function is a single entry point to fully add or remove a user from all required security or distributed systems that support platform functionality. In addition, the authentication system accesses a user customized preference profile resident on the host server. The user preference profile allows a user to customize his or her browser interface and object settings, such as market data function preferences (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was done to combine the teaching of an object pool cache to reflect the current state of the specific data object for each respective client subscribed to the particular

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input data stream and each client having an associated profile comprising data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams and evaluating from the client profile associated with the respective client the object rules associated with the particular input data stream against the specific data object and transmitting the current state of the specific data object to the respective client in response to a positive evaluation as taught respectively by Aino and Martone et al in the claimed invention of Lewis in order to detect whether a software module matches the software module preset as one which accesses shared memory 9See col. 2, lines 25-48, Aino) to track information that has been presented to clients (See page 1, paragraph [0012], Martone et al).

2. As per claim 17, Lewis teaches a system for delivering data objects containing data subject to periodic updates to a plurality of clients via a data communication network, the system comprising: a client session manager; at least one object state manager having an associated object pool cache; and at least one client session; each object state manager being configured to: connect to at least one input data stream, each input data stream carrying information related to a respective type of data objects; receive on the input data streams changes to states of data objects (See col. 4, lines 50-67); upon receipt of a state change for a specific data object on a particular data stream, and generate an object event directed to client sessions for clients subscribed to the particular data stream indicating a state change has occurred with regard to the specific data object (See col. 5, lines 26-36)t; However, Lewis fails to teach wherein the client session manager being configured to: receive initial access communications from a client; load a

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client profile associated with the client and comprising data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams and each client session being configured to: in response to the receipt of an object event, evaluate the object rules associated with the particular input data stream from the respective client profile against the specific data object change noticed by the object event, and transmitting the current state of the specific data object to the respective client in response to a positive evaluation and to update the associated object pool cache to reflect the changed current state of the specific data object

Aino et al teaches a method of controlling cache memory in multiprocessor system and the multiprocessor system based on detection of predetermined software module. Furthermore, Aino teaches updated data is reflected in the cache block and the state of the cache block is changed in accordance with the state transition (See col. 10, lines 10-26).

Martone et al teaches a browser interface and network based financial service system. Furthermore, Martone et al teaches an authentication system that also provides access to a user entitlement level containing a list of objects according to user entitlement. That is to say, different users are accorded different entitlement levels and as such, access to specific objects resident in system 10. Most preferably, a separate user entitlement level associates a user with specific market data. The authentication system also contains a move/add/change (MAC) function that updates the security function with new or changed user information. The MAC function is a single entry point to fully add or remove a user from all required security or distributed systems that support platform functionality. In addition, the authentication system accesses a user

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customized preference profile resident on the host server. The user preference profile allows a user to customize his or her browser interface and object settings, such as market data function preferences (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was done to combine the teaching of an object pool cache to reflect the current state of the specific data object for each respective client subscribed to the particular input data stream and each client having an associated profile comprising data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams and evaluating from the client profile associated with the respective client the object rules associated with the particular input data stream against the specific data object and transmitting the current state of the specific data object to the respective client in response to a positive evaluation as taught respectively by Aino and Martone et al in the claimed invention of Lewis in order to detect whether a software module matches the software module preset as one which accesses shared memory 9See col. 2, lines 25-48, Aino) to track information that has been presented to clients (See page 1, paragraph [0012], Martone et al).

3. As per claim 37, Lewis teaches a system for processing information related to financial product offerings and delivering real-time offer updates to a plurality of clients via a data communication network, the information being included in data objects carried on at least one input data stream and representing changes in state of particular product offerings, the data streams being transmitted by at least one information manager having a respective offer pool containing current states of the product offerings, the system

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comprising: at least one object state manager, each object state manager connected to a respective data input stream, comprising an associated object cache and subscriber data indicating subscribers to the respective data input stream (See col. 4, lines 50-67), and configured to: receive a data object on the connected input data stream related to a specific product offering, generate an object event directed to subscribers of the respective data input stream indicating the state change for the specific product offering in accordance with the subscriber data (See col. 16, lines 27-38); a plurality of client session modules, each client session module being in communication with a respective client and configured to: receive object events generated by object state managers connected to an input data stream to which the respective client has subscribed, upon receiving an object event, evaluate client object rules against the object event, the object rules selected in accordance with the particular data stream associated with the object event (See col. 7, lines 1-25 and col. 10, lines 20-25), and generate a state event from the object event indicating the changed state of the specific data object to the respective client in response to a positive evaluation (See col. 8, lines 50-67); a plurality of delivery managers, each delivery manager being associated with a respective client session module and configured to: receive state events generated by the associated client session module, and send client events derived from the received state events to the respective client (See col. 7, lines 19-30 and col. 10, lines 43-54). However, Lewis fails to teach a client session manager having access to a plurality of client profiles, each client profile containing data stream subscription information and related client object rules, the client manager configured to: receive an initial communication from a new client; associate the new client with a new client session module; retrieve the client profile

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associated with the new client; identify a set of data stream subscriptions indicated in the client profile; and add the new client session module to the subscription data for each object state manager connected to an input data stream to which the new client is subscribed and to update the state of the specific product offering in associated object pool cache in accordance with the state changed indicated in the received data object,

Aino et al teaches a method of controlling cache memory in multiprocessor system and the multiprocessor system based on detection of predetermined software module. Furthermore, Aino teaches updated data is reflected in the cache block and the state of the cache block is changed in accordance with the state transition (See col. 10, lines 10-26).

Martone et al teaches a browser interface and network based financial service system. Furthermore, Martone et al teaches an authentication system that also provides access to a user entitlement level containing a list of objects according to user entitlement. That is to say, different users are accorded different entitlement levels and as such, access to specific objects resident in system 10. Most preferably, a separate user entitlement level associates a user with specific market data. The authentication system also contains a move/add/change (MAC) function that updates the security function with new or changed user information. The MAC function is a single entry point to fully add or remove a user from all required security or distributed systems that support platform functionality. In addition, the authentication system accesses a user customized preference profile resident on the host server. The user preference profile allows a user to customize his or her browser interface and object settings, such as market data function preferences (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was done to combine the teaching of an object pool cache to reflect the current state of the specific data object for each respective client subscribed to the particular input data stream and each client having an associated profile comprising data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams and evaluating from the client profile associated with the respective client the object rules associated with the particular input data stream against the specific data object and transmitting the current state of the specific data object to the respective client in response to a positive evaluation as taught respectively by Aino and Martone et al in the claimed invention of Lewis in order to detect whether a software module matches the software module preset as one which accesses shared memory 9See col. 2, lines 25-48, Aino) to track information that has been presented to clients (See page 1, paragraph [0012], Martone et al).

4. As per claims 2 and 29, Lewis teaches wherein the data objects carried on the input data streams comprise differential data objects (See col. 8, lines 49-55).

5. As per claim 3, Lewis teaches after connecting to the at least one data stream, initializing the object pool cache with an initial state of data objects carried on the connected at least one data stream (See Col.8, lines 60-67).

6. As per claims 4 and 31, Lewis teaches the claimed invention as described above. However, Lewis fails to teach wherein after a communication session is established with

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a particular client, delivering to the particular client a snapshot of the data objects in the object pool cache associated with the data stream subscriptions in the profile associated with the particular client.

Martone et al teaches a browser interface and network based financial service system. Furthermore, Martone et al teaches wherein after a communication session is established with a particular client, delivering to the particular client a snapshot of the data objects in the object pool cache associated with the data stream subscriptions in the profile associated with the particular client (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was done to incorporate wherein after a communication session is established with a particular client, delivering to the particular client a snapshot of the data objects in the object pool cache associated with the data stream subscriptions in the profile associated with the particular client as taught by Martone et al in the claimed invention Lewis in order to track what information has been presented to clients (See page 1, paragraph [0012]).

7. As per claims 5 and 32, Lewis teaches the claimed invention as described above. However, Lewis fails to teach wherein in response to detecting that a particular client in a communication session has subscribed to a new input data stream not in a set of connected input data streams, connecting to the new input data stream.

Martone et al teaches wherein in response to detecting that a particular client in a communication session has subscribed to a new input data stream not in a set of

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connected input data streams, connecting to the new input data stream (See page 5, paragraph [0096-0097]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate in response to detecting that a particular client in a communication session has subscribed to a new input data stream not in a set of connected input data streams, connecting to the new input data stream as taught by Martone et al in the claimed invention of Lewis in order to track what information has been presented to clients (See page 1, paragraph [0012]).

8. As per claim 6, Lewis teaches the claimed invention as described above. Furthermore, Lewis teaches initializing the object pool cache with an initial state of data objects carried on the new input data stream; and delivering to the particular client a snapshot of the data objects in the object pool cache associated with the new data stream (See col.8, lines 59-67).

9.) As per claim 7, Lewis et al teaches wherein the step of transmitting the current state of the specific data object to the respective client comprises the steps of transmitting a client event related to the current state of the specific data object (See col. 15, lines 60-67).

10. As per claim 14, Lewis teaches wherein the step of monitoring the performance of communication with each connected client comprises determining network transmission time and a client processing time for received client events (See col. 6, lines 30-55).

11. As per claim 15, Lewis et al teaches the claimed invention as described above. Furthermore, Lewis teaches wherein the data objects comprise information related to financial product offerings (See col. 4, lines 54-59).

12. As per claim 16, Lewis et al teaches wherein the input data streams are broadcast by at least one information manager, each information manager maintaining a respective object storage pool; the method further comprising the steps of: retrieving an initial state of data objects carried on the connected at least one data stream from the object storage pool associated with the information manager broadcasting the data stream; and initializing the object pool cache with the retrieved initial states (See col. 8, lines 49-67).

13. As per claim 24, Lewis teaches the claimed invention as described above. However, Lewis fails to teach wherein each client profile comprises at least one client folder, each client folder comprising data indicating at least one subscribed data stream and containing object rules associated with the subscribed data stream; the client session being configured to evaluate the object rules associated with the particular input data stream for each folder in the client profile indicating a subscription to that stream.

Martone et al teaches wherein each client profile comprises at least one client folder, each client folder comprising data indicating at least one subscribed data stream and containing object rules associated with the subscribed data stream; the client session being configured to evaluate the object rules associated with the particular input data

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stream for each folder in the client profile indicating a subscription to that stream (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein each client profile comprises at least one client folder, each client folder comprising data indicating at least one subscribed data stream and containing object rules associated with the subscribed data stream; the client session being configured to evaluate the object rules associated with the particular input data stream for each folder in the client profile indicating a subscription to that stream as taught by Martone et al in the claimed invention of Lewis in order to track what information has been presented to clients (See page 1, paragraph [0012]).

14. As per claim 25, Lewis teaches the claimed invention as described above. Furthermore, Lewis teaches receiving requests for the current state of a set of data objects from a requestor; obtain current state information for the data objects in the set; and return the current state information to the requestor (See col. 7, lines 19-25).

15. As per claim 26, Lewis teaches the claimed invention as described above. Furthermore, Lewis teaches the object state manager is configured to request from the state dispatch module a current state of a set of data objects carried on a connected input data stream upon first connecting to that input data stream; the returned current state information being used to initialize the respective object cache for the object state manager (See col. 16, lines 28-43).

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16. As per claim 28, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches wherein the state dispatch module is connected to at least one offer pool maintained by a transmitter of the data streams received object state managers and configured to obtain current state information from an appropriate offer pool (See col. 6, lines 45-56).

17. As per claim 30, Lewis teaches wherein the data objects comprise information related to financial product offerings (See col. 6, lines 35-45).

18. As per claim 34, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches an information manager receiving raw object data streams from at least one content provider and generating the input data streams (See col. 4, lines 55-67).

19. As per claim 35, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches wherein each information manager further comprises a structured object pool containing a current state of the data objects carried on the input data streams, the object events on the input data streams representing differential changes to the state of particular data objects (See col. 16, lines 28-36).

20. As per claim 36, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches wherein the data objects carried on a particular input data

stream are of a common type (See col. 6, lines 30-35).

21. As per claim 43, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches a state dispatch module in communication with the information manager and the object caches associated with the object state managers and configured to receive a state data request as input from a requester, retrieve the current states of particular product offerings in accordance with the request, and return the current states to the requestor (See col. 8, lines 50-67).

22. As per claim 44, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches wherein the object state manager is further configured to, upon first connecting to the respective input data stream, send a request to the state dispatch module to obtain the current states of product offerings carried on the respective data stream, the obtained currents states being used to initialize the associated object cache (See col. 16, lines 28-40).

23. As per claim 45, Lewis teaches the claimed invention as described above.

Furthermore, Lewis teaches wherein the client manager is further configured to send a request to the state dispatch module to obtain the current states of product offerings carried on input data streams to which the new client is subscribed and initiate the return of at least a portion of the obtained current states to the new client (See col. 8, lines 50-67).

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24. As per claim 46, Lewis teaches the claimed invention as described above.

However, Lewis fails to teach identifying an unconnected data stream specified in the client profile associated with the new client; and initiate a connection to the unconnected data stream from a new object state manager.

Martone et al teaches identifying an unconnected data stream specified in the client profile associated with the new client; and initiate a connection to the unconnected data stream from a new object state manager (See page 3, paragraph [0072-0074]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate identifying an unconnected data stream specified in the client profile associated with the new client; and initiate a connection to the unconnected data stream from a new object state manager as taught by Martone et al in the claimed invention of Lewis in order to track what information has been presented to clients (See page 1, paragraph [0012]).

3. Claim 8-12, 18, 21-23, 27, 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,513,019 to Lewis in view of U.S. Patent Application in view of U.S. Patent No. 6,480,940 to Aino and further in view of U.S. Patent Application No 2002/0138389 to Martone et al as applied to claim 7 above, and further in view of U.S. Patent Application No. 2002/0013853 to Baber et al.

1. As per claim 8, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and

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further in view of Martone et al fails to teach the step of placing a state event in a client event queue, wherein client events derived from state events extracted from the client event queue are transmitted to the respective client.

Baber et al teaches methods, systems and computer program products for transferring a file using message queue. Furthermore, Baber et al teaches the step of placing a state event in a client event queue, wherein client events derived from state events extracted from the client event queue are transmitted to the respective client 9See page 2, paragraph [0015]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the step of placing a state event in a client event queue, wherein client events derived from state events extracted from the client event queue are transmitted to the respective client as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

2. As per claim 9, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein the state events are placed in a specific client event queue dedicated to the respective client to which the client event will be transmitted.

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Baber et al teaches wherein the state events are placed in a specific client event queue dedicated to the respective client to which the client event will be transmitted (See pages 2 and 3, paragraph [0019]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the state events are placed in a specific client event queue dedicated to the respective client to which the client event will be transmitted as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

3. As per claim 10, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Martone et al fails to teach the steps of: identifying state events to be transmitted to the respective client which are related to a common data object; and aggregating the identified state events to thereby reduce the number of state events in the queue.

Baber et al teaches identifying state events to be transmitted to the respective client which are related to a common data object; and aggregating the identified state events to thereby reduce the number of state events in the queue (See page 2, paragraph [0018]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate identifying state events to be transmitted to the respective client which are related to a common data object; and aggregating the identified state events to thereby reduce the number of state events in the queue as taught

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by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

4. As per claim 11, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view Aino and further in view of Martone et al fails to teach where the identified state events are aggregated into at most one state event.

Baber et al teaches where the identified state events are aggregated into at most one state event (See page 2, paragraph [0018]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate where the identified state events are aggregated into at most one state event as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

5. As per claim 12, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein the step of identifying is performed by comparing an object ID in a state event to be placed into the respective client event queue with the object ID of events in the respective client event queue.

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Baber et al teaches wherein the step of identifying is performed by comparing an object ID in a state event to be placed into the respective client event queue with the object ID of events in the respective client event queue (See page 3, paragraph [0020]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the step of identifying is performed by comparing an object ID in a state event to be placed into the respective client event queue with the object ID of events in the respective client event queue as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

6. As per claim 18, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach a delivery manager associated with each respective client session; the client sessions being configured to transmit the current state by forwarding a state event to the associated delivery manager; the delivery manager comprising: a client queue manager configured to place received client events on a client event queue; and a push module configured to retrieve state events from the client event queue and send a client event derived from the state event to the respective client.

Baber et al teaches a delivery manager associated with each respective client session; the client sessions being configured to transmit the current state by forwarding a state event to the associated delivery manager; the delivery manager comprising: a client queue manager configured to place received client events on a client event queue; and a

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push module configured to retrieve state events from the client event queue and send a client event derived from the state event to the respective client (See page 4, paragraph [0038]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate a delivery manager associated with each respective client session; the client sessions being configured to transmit the current state by forwarding a state event to the associated delivery manager; the delivery manager comprising: a client queue manager configured to place received client events on a client event queue; and a push module configured to retrieve state events from the client event queue and send a client event derived from the state event to the respective client as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

7. As per claim 38, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Martone et al fails to teach wherein each delivery manager comprises: a client event queue for containing events to be transmitted to the respective client; a queue manager configured to place events on the queue in accordance with received state events; and a push module configured to retrieve events from the client event queue and send appropriate client events to the respective client.

Baber et al teaches wherein each delivery manager comprises: a client event queue for containing events to be transmitted to the respective client; a queue manager

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configured to place events on the queue in accordance with received state events; and a push module configured to retrieve events from the client event queue and send appropriate client events to the respective client (See page 4, paragraph [0038]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein each delivery manager comprises: a client event queue for containing events to be transmitted to the respective client; a queue manager configured to place events on the queue in accordance with received state events; and a push module configured to retrieve events from the client event queue and send appropriate client events to the respective client as taught by Barter et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

8. As per claims 21 and 41, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view Martone et al fails to teach wherein the queue manager is further configured to: identify events to be transmitted to the respective client which are related to a common data object; and initiate an aggregation of the identified events to thereby reduce the number of client events in the queue.

Baber et al teaches wherein the queue manager is further configured to: identify events to be transmitted to the respective client which are related to a common data object; and initiate an aggregation of the identified events to thereby reduce the number of client events in the queue (See page 5, paragraph [0042]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the queue manager is further configured to: identify events to be transmitted to the respective client which are related to a common data object; and initiate an aggregation of the identified events to thereby reduce the number of client events in the queue as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

9. As per claim 22, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein the identified events are aggregated into at most one event.

Baber et al teaches wherein the identified events are aggregated into at most one event (See page 5, paragraph [0042]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the identified events are aggregated into at most one event as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

10. As per claims 23 and 42, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein each state event received by

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the queue manager has associated aggregation functionality; and the queue manager is configured to initiate aggregation by executing the aggregation functionality associated with a received state event when the client event queue contains a queued event related to data object common to the received state event.

Baber et al teaches wherein each state event received by the queue manager has associated aggregation functionality; and the queue manager is configured to initiate aggregation by executing the aggregation functionality associated with a received state event when the client event queue contains a queued event related to data object common to the received state event (See page 4, paragraph [0038]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein each state event received by the queue manager has associated aggregation functionality; and the queue manager is configured to initiate aggregation by executing the aggregation functionality associated with a received state event when the client event queue contains a queued event related to data object common to the received state event as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

11. As per claim 27, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein the object state manager further comprises an update queue, the object state manager being further configured to place

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current states received from the input data stream on the update queue during a pendency of the request and apply the queued current states to data in the object cache after cache initialization is complete.

Baber et al teaches wherein the object state manager further comprises an update queue, the object state manager being further configured to place current states received from the input data stream on the update queue during a pendency of the request and apply the queued current states to data in the object cache after cache initialization is complete (See page 4, paragraph [0038]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the object state manager further comprises an update queue, the object state manager being further configured to place current states received from the input data stream on the update queue during a pendency of the request and apply the queued current states to data in the object cache after cache initialization is complete as taught by Baber et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

12. As per claim 39, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push

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module being configured to send client events to the respective client at the dynamically determined rate.

Baber et al teaches wherein at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push module being configured to send client events to the respective client at the dynamically determined rate (See page 5, paragraph [0042]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push module being configured to send client events to the respective client at the dynamically determined rate as taught by Barter et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to provide for improved performance for data communications (See page 1, paragraph [0008]).

13. As per claim 40, Lewis teaches wherein the performance characteristics comprise network transmission time and a client processing speed time for received client events (See col. 6, lines 30-55).

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4. Claims 13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over 6,513,019 to Lewis in view of in view of U.S. Patent No. 6,480,940 to Aino and further in view of U.S. Patent Application No 2002/0138389 to Martone et al as applied to claim as applied to claim 1 above, and further in view of U.S. Patent No. 6,708, 213 to Bommaiah et al.

1. As per claim 13, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach monitoring the performance of communication with each connected client; and dynamically adjusting the rate at which client events are transmitted to the respective clients in response to the monitored performance.

Bommaiah et al teaches a method for streaming multimedia information over public networks. Furthermore, Bommaiah et al teaches monitoring the performance of communication with each connected client; and dynamically adjusting the rate at which client events are transmitted to the respective clients in response to the monitored performance (See col. 3, lines 1-6).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate monitoring the performance of communication with each connected client; and dynamically adjusting the rate at which client events are transmitted to the respective clients in response to the monitored performance as taught by Bommaiah et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to reduce start-up latency (See col. 3, lines 1-5).

2. As per claim 19, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach wherein: at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push module being configured to send client events to the respective client at the dynamically determined rate.

Bommaiah et al teaches wherein: at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push module being configured to send client events to the respective client at the dynamically determined rate (See col. 3, lines 1-6).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein: at least one of the client session and the push module are configured to monitor the performance characteristics for communications with the respective client and dynamically determine a rate at which client events should be transmitted in response to the monitored characteristics; the push module being configured to send client events to the respective client at the dynamically determined rate as taught by Bommaiah et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order to reduce start-up latency (See col. 3, lines 1-5).

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3. As per claim 20, Lewis teaches wherein the performance characteristics comprise network transmission time and a client processing speed time for received client events (See col. 6, lines 30-55).

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over 6,513,019 to Lewis in view of in view of U.S. Patent No. 6,480,940 to Aino and further in view of U.S. Patent Application No 2002/0138389 to Martone et al as applied to claim as applied to claim 40 above, and further in view of U.S. Patent No. 6,571,274 to Jacobs et al.

1. As per claim 33, Lewis in view of Aino and further in view of Martone et al teaches the claimed invention as described above. However, Lewis in view of Aino and further in view of Martone et al fails to teach an HTTP Tunneling transport module connected between the delivery manager and the respective client.

Jacobs et al teaches an HTTP Tunneling transport module connected between the delivery manager and the respective client (See col. 4, lines 44-50)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate an HTTP Tunneling transport module connected between the delivery manager and the respective client taught by Jacobs et al in the claimed invention of Lewis in view of Aino and further in view of Martone et al in order transfer messages (See col. 8, lines 48-52).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application No. 2002/0112056 to Baldwin et al teaches a method and system for providing distributed functionality and data analysis system utilizing same.

U.S. Patent Application No. 2003/0115122 to Slater et al teaches a system and method for alert processing and delivery.

U.S. Patent No. 6,799,196 to Smith teaches an on-demand data streaming parceling.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M Bayard whose telephone number is (703) 305-6606. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..

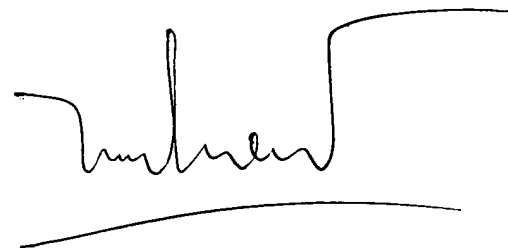
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Djenane Bayard

Patent Examiner

A handwritten signature in black ink, appearing to read 'Le Hien Luu', with a long horizontal line extending from the end of the signature.

LE HIEN LUU
PRIMARY EXAMINER